EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Thomas Schneck (24518) on 19 June 2009 (see attached interview summary).

1.   The claim listing beginning on the next page shall replace all prior versions of the claims.

Listing of Claims:

1-21. (Cancelled)

22. (Currently Amended) A method of managing selected capabilities of [[a]] an

electronics communications network having a plurality of devices and network nodes

interconnected by a set of undirected links, each link allowing information traffic of one

or more specified media types, wherein a network node comprises one or more devices,

the method comprising:

（1) determining a role of each node in the communications network as either a

centre node, a region member node, or a border node, and each border node as either

a bridge node or a dangler node, by:

a) assigning link strength values to each link in the network based on (i) a

number of different media types supported by that link, (ii) a total amount of

information traffic on that link over a given time interval, or (iii) a sum of fractions

resulting from dividing an amount of information traffic of each media type by

total information traffic on the network of that same media type;

b) organizing the assigned link strength values into an adjacency matrix

representing the links between all pairs of nodes of the network, then computing

a principle eigenvector of that adjacency matrix, the principle eigenvector

providing a set of eigenvector centrality

(EVC) indices representing connectedness for each node of the network;

c) identifying as a centre node of the network each node that corresponds to a local maximum of the EVC indices, each centre node having an associated network region of one or more nodes;

d) identifying as a region member node of a particular network region each node that may be uniquely associated according to an unambiguous rule with a single centre node, the unambiguous rule being selected from (i) a distance rule in which region members are closer in number of shortest path hops to an associated centre node than to any other centre node, or (ii) a steepest ascent rule in which region members have a steepest ascent path that will terminate at an associated centre node; and

e) identifying as a ~~boundary member~~ border node between network regions each node for which the selected unambiguous rule gives more than one centre node, where the ~~boundary member~~ border nodes that lie on a non-self-retracing path between two centre nodes are further identified as bridge nodes, and all other ~~boundary member~~ border nodes are identified as dangler nodes; and

(2) using the determined role of each node to manage any one or more of network robustness, network security ~~or~~, network communication efficiency, ~~at least including~~ or control of spread of information through determined bridge nodes between network regions associated with the different centre nodes.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

2.   The invention of claim 22 is directed towards a method of managing a network
based on node roles based on various role assignment criteria.

The cited prior art of record discloses fundamental concepts surrounding social
networking, clustering based on various criteria, and managing various network
functionality based on such clustering. However, the combined teachings of the
references of record fail to render obvious the specific roles and criteria used to assign
said roles, as claimed, and, therefore, the claimed method would not be obvious in view
of the prior art.

3.   Claim 22 is interpreted as being directed towards a method tied to one or more
particular machines.

Any comments considered necessary by applicant must be submitted no later
than the payment of the issue fee and, to avoid processing delays, should preferably
accompany the issue fee. Such submissions should be clearly labeled "Comments on
Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
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Examiner, Art Unit 2442

/Andrew Caldwell/
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